

A Sticky Problem for Farmers

by Nathan Aaseng

TIRED OF WRESTLING WITH THE ROCKY, stump-cluttered soil of New England, farmers in the early 19th century often followed rumors of better land to the midwestern United States. There, in states such as Illinois and Iowa, they found just what they were looking for: prairies full of rich, black dirt that promised to pump life into seeds as fast as
5 they were planted.

Unfortunately, many settlers soon felt like thirsty sailors in the middle of the ocean—water everywhere but not a drop to drink. Rich soil surrounded them, but their equipment could not plow it. That was the problem a blacksmith named John Deere faced when he arrived in Grand Detour, Illinois, in 1836.

10 His Illinois neighbors had been desperate for a blacksmith ever since they had settled in Grand Detour. No sooner did Deere set foot in town than he found a line of farmers eager to offer him business. Two days after his arrival in Grand Detour, he was hard at work fixing broken equipment.

15 While working at his shop, Deere frequently heard complaints from farmers about the soil. Their early excitement about the richness of the soil and the ease with which a plow could break the sod had turned to frustration. The soil was too rich. Instead of falling away from the plow like sandy New England soil, it stuck. Farmers had to stop every few seconds to scrape the clumped dirt off their iron plowshares with large wooden paddles. They might as well have been plowing through a rocky field for all the progress they were
20 making. Some farmers were so discouraged by the sticky soil that they left in search of new land; others were ready to join them.

Deere decided to look into the problem. From his previous work on plows, he knew that dirt was less likely to stick to highly polished metal. That thought was in the back of his mind when he visited a sawmill in 1837 and noticed a broken circular saw made of
25 steel, a polished metal that was too expensive to be widely used for implements. Steel had never been used to make a plowshare.¹

Deere took the broken saw blade home with him and began working on a better plow. He knew that polished steel was not the whole answer; the shape of the plow's bottom was also important.

¹ Historians now believe that the first steel plowshare was made by John Lane in 1833. However, John Deere was the first to make steel plowshares commercially successful.

30 The plow Deere wanted to make would have to cut deeply into the soil at a sharp angle so that dirt would fall off, yet it could not put too much burden on the horses pulling it. After some experiments, Deere found the curved shape he needed and pounded the steel saw blade into that shape. He then built a plow, complete with oak handles, and brought it to the farm of his neighbor, Lewis Crandall.

35 While an anxious crowd of Grand Detour farmers watched, Crandall tried the new plow. He pronounced it a success. Not only did dirt fall away cleanly from the blade, but the plow also turned the soil more quickly than the old cast-iron plows.

Other farmers wanted one of Deere's "self-scouring" plows. The blacksmith could not meet the instant demand, however. For one thing, polished steel was hard to find. Deere
40 could not count on a steady supply of broken saw blades to use as raw material. Steel was only available from England, and it was expensive to import. There was no such thing as mass production in the blacksmithing business; plows were made one at a time according to each customer's needs. Deere and his new partner in the business, Leonard Andrus, manufactured only 2 "self-scouring" plows in 1838 and 10 the following year.

45 Production gradually increased, however, as Deere imported greater quantities of expensive English steel. Forty handmade plows left his shop in 1840 and, after expanding his workshop to include a foundry in 1843, Deere's production rose to 400 plows a year.

Until then, Deere still considered himself a blacksmith—his plow was just one part of his craft. But after seeing that he could easily sell as many plows as he could make, even
50 using costly English steel, the blacksmith decided to devote his time to manufacturing plows. In 1846 he found a Pittsburgh steel firm that could supply him with all the steel he needed for a lower price than what the English steel cost. The following year, he moved his business to Moline, Illinois, where the Mississippi River provided water power and transportation.

55 During the early years, Deere's sales strategy consisted of loading a wagon with plows and visiting farms until all his merchandise was sold. He rarely had to travel far. Producing plows before they were ordered was an innovative approach to sales. By 1857 the company, which he had reorganized with new partners under the name John Deere & Company, was making and selling 10,000 plows a year—nearly seven times as many as he
60 had sold just seven years earlier.

A relentless perfectionist, Deere kept tinkering with his plows, trying to make them better. He came out with 10 new versions of his plow in a single year. While this slowed down his production ability, it ensured Deere a solid reputation among his customers. Deere plows became world famous in the 1870s when they outshone the competition in a
65 demonstration in France. That same decade, the company built its first riding plow and designed the leaping deer as its trademark.